

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-13. (Canceled)

14. (Currently Amended) A method for etching a feature in an etch layer through a mask over a substrate, comprising:

placing the substrate in a process chamber;

providing a first etch plasma composition to the process chamber, wherein the first etch plasma composition begins etch a feature in the etch layer;

providing a second etch plasma composition, wherein the second etch plasma composition continues to etch the feature in the etch layer; and

providing a third etch plasma composition, wherein the third etch plasma composition continues to etch the feature in the etch layer, wherein the third etch plasma composition is more aggressive with respect to etch stop than the second etch plasma composition and the second etch plasma composition is more aggressive with respect to etch stop than the first etch plasma composition, and wherein the first etch plasma is more selective than the second etch plasma and the second etch plasma is more selective than the third etch plasma.

15-19. (Canceled)

20. (Previously Presented) The method, as recited in claim 14, wherein the providing the first etch, the second etch, and the third etch, provides a ramping of at least one etch plasma parameter during the etching of the feature that optimizes plasma parameters to a changing etch depth and etching with the ramped plasma until the feature is etched to a feature depth.

21-22. (Cancelled)

23. (Previously Presented) The method, as recited in claim 20, wherein the ramping occurs over a time period of greater than 30 seconds.

24. (Previously Presented) The method, as recited in claim 20, wherein the ramping occurs over greater than 50% of the duration of the etch.

25. (Previously Presented) The method, as recited in claim 20, wherein the ramping is a non-linear ramping.

26. (Previously Presented) The method, as recited in claim 14, wherein the etch layer is a dielectric layer.

27. (Cancelled)

28. (Currently Amended) The method, as recited in claim ~~14~~ 15, wherein the first etch plasma being more selective than the second etch plasma means that the first ~~etch~~ etch plasma more selectively etches the etch layer with respect to the mask than the second etch plasma and wherein the second etch plasma being more selective than the third etch plasma means that the second etch plasma more selectively etches the etch layer with respect to the mask than the third etch plasma.

29. (Previously Presented) A method for etching a feature in a single uniform etch layer through a mask over a substrate, comprising:

placing a substrate in a process chamber,

providing an etch plasma to the process chamber, wherein the etch plasma begins to etch, comprising:

providing an etch gas with a component gas, wherein the etch gas has an etch gas flow rate and the component gas has a flow rate, and

energizing the etch gas to convert the etch gas to an etch plasma;

etching a feature in the single uniform etch layer with the etch plasma;

ramping the flow rate of the component gas during the etching of the feature into the single uniform etch layer until the feature is etched to a feature depth, wherein the ramping occurs for at least 30% of the duration of the etch, wherein the ramping is at least one of a continuous ramping and a series of discrete steps that mimic a continuous ramping.

30-31. (Canceled)

32. (Previously Presented) The method, as recited in claim 29, wherein the ramping up occurs over a time period of greater than 30 seconds.

33. (Previously Presented) The method, as recited in claim 29, wherein the ramping occurs over greater than 50% of the duration of the etch.

34. (Previously Presented) The method, as recited in claim 29, wherein the ramping is a non-linear ramping.

35. (Previously Presented) The method, as recited in claim 29, wherein the ramping is a linear ramping.

36. (Canceled)

37. (Previously Presented) An apparatus for etching a feature in an etch layer through a mask over a substrate, comprising:

a plasma processing chamber, comprising:

a chamber wall forming a plasma processing chamber enclosure;

a substrate support for supporting a substrate within the plasma processing chamber enclosure;

a pressure regulator for regulating the pressure in the plasma processing chamber enclosure;

at least one electrode for providing power to the plasma processing chamber enclosure for sustaining a plasma;

a gas inlet for providing gas into the plasma processing chamber enclosure; and

a gas outlet for exhausting gas from the plasma processing chamber enclosure;

a gas source in fluid connection with the gas inlet,

a controller controllably connected to at least one of the gas source the at least one electrode, the pressure regulator, the gas inlet, and the gas outlet, comprising:

at least one processor; and

computer readable media, comprising:

computer readable code for providing an etch gas with a component gas from the gas source through the gas inlet into the plasma processing chamber at a flow rate, wherein the component gas has a flow rate;

computer readable code for energizing the at least one electrode to

convert the etch gas to an etch plasma to cause a feature to be etched into the etch layer;

computer readable code for ramping the flow rate of the component gas to etch features into a single uniform etch layer, wherein the ramping occurs for at least 30% of the duration of the etch, wherein the ramping is at least one of a continuous ramping and a series of discrete steps that mimic a continuous ramping.

38. (Previously Presented) The method, as recited in claim 29, wherein the ramping decreases etch selectivity between the single uniform etch layer and the mask.

39. (Previously Presented) The method, as recited in claim 29, wherein the ramping increases etch aggressiveness with respect to etch stop.

40. (Previously Presented) The method, as recited in claim 29, wherein the single uniform layer is a dielectric layer.

41. (Previously Presented) The method, as recited in claim 29, wherein the single uniform layer is a low k dielectric layer.